

REMARKS

This application has been carefully reviewed in light of the Office Action dated June 3, 2005. Claims 1 to 9 and 11 to 14 are pending in the application, with Claim 10 having been cancelled. Claims 1, 2, 4, 5, 7, 8, 9 and 11 to 14 have been amended, and Claims 1, 7, 8, 9 and 11 are in independent form. Reconsideration and further examination are respectfully requested.

Claims 4 and 5 were objected to based on alleged informalities. In response, the term “at least one the hierarchical” has been amended to “at least one of the hierarchical” in each of Claims 4 and 5. In this regard, Claim 5, which refers to “said” at least one of the hierarchical communication elements, has also been amended to depend on Claim 4. Reconsideration and withdrawal of this objection are respectfully requested.

Claim 11 was rejected under 35 U.S.C. § 101 for allegedly claiming non-statutory subject matter. In response, Claim 11 has been amended to recite a “computer-readable medium storing a computer-executable program which directs a processor to execute a method”. Reconsideration and withdrawal of this rejection are respectfully requested.

Claims 1, 7, 8, 9, 10 and 11 were rejected under 35 U.S.C. § 103(a) over IBM Technical Disclosure, “Multiple Control Unit/Device Emulator for Testing Computer Programs”, September 1971 (IBM Technical Disclosure) in view of U.S. Patent No. 6,344,901 (Simon), further in view of U.S. Patent No. 6,081,856 (Comer), further in view of U.S. Patent No. 5,835,688 (Fromherz), further in view of McConnell, Steve, “Code Complete”, 1993, Microsoft Press (McConnell), and further in view of Tanenbaum, Andrew S., “Computer Networks”, 1988, Prentice-Hall (Tanenbaum); Claims 2 and 12

were rejected under 35 U.S.C. § 103(a) over IBM Technical Disclosure, Simon, Comer, Fromherz, McConnell and Tanenbaum; Claims 3 and 13 were rejected under 35 U.S.C. § 103(a) over IBM Technical Disclosure, Simon, Comer, Fromherz, McConnell and Tanenbaum; Claim 4 was rejected under 35 U.S.C. § 103(a) over IBM Technical Disclosure, Simon, Comer, Fromherz, McConnell and Tanenbaum; Claim 5 was rejected under 35 U.S.C. § 103(a) over IBM Technical Disclosure, Simon, Comer, Fromherz, McConnell, Tanenbaum, U.S. Patent No. 6,111,886 (Stewart) and allegedly common knowledge in the art; and Claims 6 and 14 were rejected under 35 U.S.C. § 103(a) over IBM Technical Disclosure, Simon, Comer, Fromherz, McConnell and Tanenbaum. Claim 10 has been cancelled without prejudice or disclaimer of the subject matter and without conceding the correctness of its rejection. Reconsideration and withdrawal of the rejection of the remaining claims are respectfully requested.

The present invention generally concerns simulation of a print engine for a development system including a print controller adapted to communicate with the print engine to thereby control the print engine. A communication is interpreted from the print controller into hierarchical communication elements. A state machine representation of the print engine is responsive to the communication from the print controller. At least one communication is displayed from the print controller, the hierarchical communication elements, and a communication from the state machine in response to the communication from the print controller.

Thus, among its many features, the present invention provides that (i) a communication from a print controller adapted to communicate with a print engine is interpreted into hierarchical communication elements, and that (ii) a state machine

representation of the print engine is responsive to the communication from the print controller.

Referring specifically to the claims, independent Claims 1 and 7 are directed to a print engine simulator, and independent Claim 8, 9 and 11 are respectively directed to a system, a method and a computer-readable medium.

The applied art is not seen to disclose or to suggest the features of the invention of the subject application. In particular, IBM Technical Disclosure, Simon, Comer, Fromherz, McConnell, Tanenbaum and Stewart are not seen to disclose or suggest at least the features that (i) a communication from a print controller adapted to communicate with a print engine is interpreted into hierarchical communication elements, and that (ii) a state machine representation of the print engine is responsive to the communication from the print controller.

As understood by Applicant, IBM Technical Disclosure discloses a microprogram for converting a small central processing unit into a device for emulating multiple input/output devices and associated control units. Regarding feature (i), the Office Action acknowledges that IBM Technical Disclosure does not disclose that a communication from a print controller adapted to communicate with a print engine is interpreted into hierarchical communication elements, but cites to column 4, lines 32 to 26 of Simon and to page 20, Figure 1-8 of Tanenbaum for this alleged disclosure.

The cited portion of Simon discloses that an interpreter or raster image processor translates instructions in a PostScript language file into dot or pixel data for printing on a printer. Although Simon may be seen to disclose the interpretation of instructions associated with printing, Simon is not seen to disclose or suggest interpreting a

communication from a print controller, muchless that such communication is interpreted into hierarchical communication elements.

With reference to Tanenbaum, the cited portion discloses data transmission using an OSI model, in which a sending process sends data to a receiving process, and in which different layers are present. However, Tanenbaum is not seen to disclose or suggest that hierarchical elements are based on an interpretation of a communication from a print controller. Rather, Tanenbaum is merely seen to disclose data transmission in an OSI model having multiple layers.

Furthermore, the Office Action alleges that the motivation to modify the device emulation of IBM Technical Disclosure in view of Simon is to improve printer capabilities without degrading performance to undesirable levels. However, Applicant respectfully submits that this is a post-hoc rationalization for making the combination, which is not supported by any teachings in the applied art itself. In particular, while it may be a general objective to improve printer capabilities without degrading performance, such an objective does not provide any suggestion of the means by which this objective might be attained.

Turning to feature (ii), the Office Action acknowledges that IBM Technical Disclosure does not disclose that a state machine representation of a print engine is responsive to communication from a print controller. However, the Office Action cites to the abstract of Fromherz for this alleged disclosure.

The cited portion of Fromherz discloses a system for automatically analyzing timing constraints of capabilities, and establishing parameters for automatic generation of finite-state machines which schedule from print engine capabilities. Column

1, lines 34 to 37 of Fromherz further discloses that the system allows for automated scheduling of printing jobs pursuant to the capabilities associated with modular components forming a printing machine. In addition, column 3, lines 9 to 24 of Fromherz discloses that correlated data is analyzed to optimize, schedule and control operation of the printing machine, which is said to most efficiently accomplish the series of printing tasks.

In other words, Fromherz is seen to disclose that finite-state machines are generated to schedule print engine capabilities, for more efficient accomplishment of printing tasks. However, Fromherz is not seen to disclose or suggest that a state machine represents a print engine, muchless that such a state machine is responsive to a communication from a print controller.

Furthermore, the Office Action alleges that the motivation to modify the device emulation of IBM Technical Disclosure in view of Fromherz is to provide enhanced usability and configurability. However, Applicant respectfully submits that this is a post-hoc rationalization for making the combination, which is not supported by any teachings in the applied art itself. In particular, while it may be a general objective to provide enhanced usability and configurability, such an objective does not provide any suggestion of the means by which this objective might be attained.

As such, even if IBM Technical Disclosure, Simon, Fromherz and Tanenbaum are combined in the manner proposed in the Office Action (assuming for argument's sake that such combination would be permissible), the result would not teach at least the features that (i) a communication from a print controller adapted to communicate with a print engine is interpreted into hierarchical communication elements, and that (ii) a

state machine representation of the print engine is responsive to the communication from the print controller.

In addition, Comer, McConnell and Stewart have been reviewed and are not seen to compensate for the deficiencies of IBM Technical Disclosure, Simon, Fromherz and Tanenbaum.

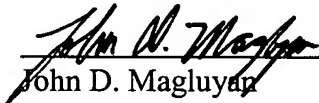
Accordingly, based on the foregoing amendments and remarks, independent Claims 1, 7, 8, 9 and 11 as amended are believed to be allowable over the applied references.

The other claims in the application are each dependent from the independent claims and are believed to be allowable over the applied references for at least the same reasons. Because each dependent claim is deemed to define an additional aspect of the invention, however, the individual consideration of each on its own merits is respectfully requested.

No other matters being raised, it is believed that the entire application is fully in condition for allowance, and such action is courteously solicited.

Applicant's undersigned attorney may be reached in our Costa Mesa,
California office at (714) 540-8700. All correspondence should continue to be directed to
our below-listed address.

Respectfully submitted,



John D. Magluyan
Attorney for Applicant
Registration No.: 56,867

FITZPATRICK, CELLA, HARPER & SCINTO
30 Rockefeller Plaza
New York, New York 10112-3800
Facsimile: (212) 218-2200

CA_MAIN 101494v1